## (19) World Intellectual Property Organization

International Bureau



## 

(43) International Publication Date 8 July 2004 (08.07.2004)

**PCT** 

## (10) International Publication Number WO 2004/057188 A1

(51) International Patent Classification<sup>7</sup>: 31/00, 35/04

F04B 39/02,

(21) International Application Number:

PCT/KR2003/001375

(22) International Filing Date:

10 July 2003 (10.07.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 10-2002-0081891

20 December 2002 (20.12.2002) KR

- (71) Applicant (for all designated States except US): LG ELECTRONICS INC. [KR/KR]; 20, Yoido-Dong, Youngdungpo-Gu, Seoul 150-010 (KR).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): KWON, Gi-Bong [KR/KR]; Daedong Apt. 608-1301, Seokbongmaeul, Sammoon-Li, Jangyu-Myeon, Gimhae, Gyungsangnam-Do 621-831 (KR).

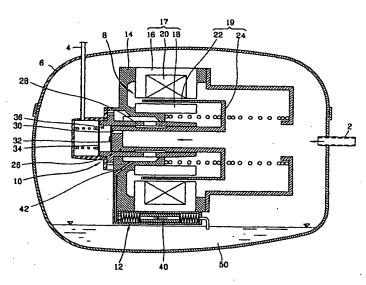
- (74) Agent: PARK, Jang-Won; Jewoo Bidg. 5th Floor, 200, Nonhyun-Dong, Gangnam-Gu, Seoul 135-010 (KR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RECIPROCATING COMPRESSOR FOR REFRIGERATOR



(57) Abstract: A reciprocating compressor with an improved lubrication performance by using a lubricant in harmony with a refrigerant compressed therein, which includes: a hermetic container (6) to which a suction pipe (2) for sucking a refrigerant and a discharge pipe (4) for discharging a compressed refrigerant; a driving unit (8) disposed inside the hermetic container (6) and generating a reciprocal motional force; a compression unit (10) for receiving the reciprocal motional force from the driving unit (8) and compressing an ethane group-based R134a refrigerant; and a lubrication unit (12) for supplying a lubricant to each motional portion of the driving unit (8) and the compression unit (10) and performing a lubricating operation thereon and using an ester-based lubricant, a sort of synthetic fluid with a density of 0.91~0.99 (15/4°C)

